

I claim:

1. A mobile data system having automated shutdown, wherein said mobile data system is mounted in a motor vehicle having a vehicle motor and a vehicle electrical power source for providing variable voltage electrical power to said motor vehicle and said mobile data system, said mobile data system comprising:

5 a system computer having means for informational data retrieval in response to user input queries and means for creating a system shutdown command in response to parameter comparison data;

10 a system interface device electrically coupled with said vehicle electrical power source to receive variable voltage electrical power from said vehicle electrical power source;

15 a computer power supply positioned in series between said system computer and said system interface device and electrically coupled with said system interface device and said system computer to receive said variable voltage electrical power from said system interface device, convert said variable voltage electrical power to voltage regulated electrical power, and transmit said voltage regulated electrical power to said system computer for informational data retrieval operation thereof;

20 means for creating said parameter comparison data, wherein said parameter comparison data is a comparison of actual parameter values of an established operating parameter with a threshold parameter value; and

means for interrupting transmission of said voltage regulated electrical power from said computer power supply to said system computer in response to said system shutdown command.

25 2. The mobile data system of claim 1, wherein said computer power supply includes a DC to DC converter.

3. The mobile data system of claim 1, wherein said transmission interruption means includes an enabling switch in said computer power supply having an enabling state and a disabling state, and further wherein said computer power supply transmits said voltage regulated electrical power to said system computer when said enabling

switch is in said enabling state and said computer power supply interrupts transmission of said voltage regulated electrical power to said system computer when said enabling switch is in said disabling state.

4. The mobile data system of claim 3, wherein said transmission interruption means further includes means in said system interface device for creating an enabling switch control signal in response to said system shutdown command.

5 5. The mobile data system of claim 4, wherein said control signal means includes a microprocessor and a system interface operating program running on said microprocessor.

10 6. The mobile data system of claim 5, wherein said control signal means further includes a communications link between said microprocessor and said enabling switch for transmitting said control signal from said microprocessor to said enabling switch.

15 7. The mobile data system of claim 1, wherein said transmission interruption means includes a system power switch having an open state and a closed state, and further wherein said variable voltage electrical power is transmitted through said system power switch to said computer power supply when said system power switch is in said closed state and said system power switch interrupts transmission of said variable voltage electrical power to said computer power supply when said system power switch is in said open state.

20 8. The mobile data system of claim 1, wherein said parameter comparison data creating means includes a microprocessor in said system interface device and a system interface operating program running on said microprocessor.

25 9. The mobile data system of claim 8, wherein said system interface device includes an analog to digital converter to read real-time operating data, and further wherein said microprocessor and system interface operating program create said actual parameter values from said real-time operating data.

10. The mobile data system of claim 9, wherein said system interface device includes an analog to digital converter to read real-time operating data, and further

wherein a computer processor in said system computer creates said actual parameter values from said real-time operating data.

11. The mobile data system of claim 1, wherein said parameter comparison data creating means includes a computer processor in said system computer.

5 12. The mobile data system of claim 1, wherein said shutdown command creating means includes a computer processor in said system computer and an automated shutdown control program running on said computer processor.

10 13. A mobile data system having automated shutdown, wherein said mobile data system is mounted in a motor vehicle having a vehicle motor and a vehicle electrical power source for providing variable voltage electrical power to said motor vehicle and said mobile data system, said mobile data system comprising:

15 a system computer having means for informational data retrieval in response to user input queries and means for creating a system shutdown command in response to parameter comparison data;

20 15 a system interface device electrically coupled with said vehicle electrical power source to receive variable voltage electrical power from said vehicle electrical power source;

25 20 a computer power supply positioned in series between said system computer and said system interface device and electrically coupled with said system interface device and said system computer to receive said variable voltage electrical power from said system interface device, convert said variable voltage electrical power to voltage regulated electrical power, and transmit said voltage regulated electrical power to said system computer for informational data retrieval operation thereof; and

25 means for creating said parameter comparison data and transmitting said parameter comparison data from said system interface device to said system computer, wherein said parameter comparison data is a comparison of actual parameter values of an established operating parameter with a threshold parameter value.

14. The mobile data system of claim 13, wherein said parameter comparison data creating means includes a microprocessor in said system interface device and a

system interface operating program running on said microprocessor.

15. The mobile data system of claim 13, wherein said parameter comparison data creating means includes a computer processor in said system computer.

16. The mobile data system of claim 13, wherein said system shutdown command creating means includes a computer processor and an automated shutdown control program running on said computer processor.

17. A mobile data system having automated shutdown, wherein said mobile data system is mounted in a motor vehicle having a vehicle motor and a vehicle electrical power source for providing variable voltage electrical power to said motor vehicle and said mobile data system, said mobile data system comprising:

10 a system computer having means for informational data retrieval in response to user input queries;

15 a system interface device electrically coupled with said vehicle electrical power source to receive variable voltage electrical power from said vehicle electrical power source;

20 a computer power supply positioned in series between said system computer and said system interface device and electrically coupled with said system interface device and said system computer to receive variable voltage electrical power from said system interface device, convert said variable voltage electrical power to voltage regulated electrical power, and transmit said voltage regulated electrical power to said system computer for informational data retrieval operation thereof;

25 said system interface device further having a microprocessor and a system interface operating program running on said microprocessor for creating parameter comparison data, wherein said parameter comparison data is a comparison of actual parameter values of an established operating parameter with a threshold parameter value;

30 said system computer further having a computer processor and an automated shutdown control program running on said computer processor for reading said parameter comparison data and creating a system shutdown command in response to

said parameter comparison data.

18. A method for automated shutdown of a mobile data system comprising:
mounting a mobile data system in a motor vehicle, wherein said mobile data system has a computer power supply and a system computer capable of retrieving informational data in response to user input queries, and further wherein said motor vehicle has a vehicle motor and a vehicle electrical power source;

5 transmitting variable voltage electrical power from said vehicle electrical power source to said computer power supply;

10 converting said variable voltage electrical power to voltage regulated electrical power in said computer power supply;

transmitting said voltage regulated electrical power from said computer power supply to said system computer for informational data retrieval operation thereof;

15 establishing an established operating parameter as a shutdown indicator for said mobile data system;

assigning a threshold parameter value to said established operating parameter;

monitoring operation of said mobile data system or said motor vehicle to determine actual parameter values of said established operating parameter;

comparing said actual parameter values with said threshold parameter value to create parameter comparison data; and

20 interrupting transmission of voltage regulated electrical power to said system computer in response to said parameter comparison data.

19. The method of claim 18, further comprising running at least one application program on said system computer.

20. The method of claim 19, further comprising closing said at least one application program running on said system computer in response to said parameter comparison data.

21. The method of claim 19, further comprising creating a system shutdown command using said system computer prior to closing said at least one application program, wherein said system shutdown command is created in response to said

parameter comparison data.

22. The method of claim 21, further comprising creating an enabling switch control signal in response to said system shutdown command and communicating said enabling switch control signal to said computer power supply.

5 23. The method of claim 22, further comprising terminating transmission of said voltage regulated electrical power from said computer power supply to said system computer in response to said enabling switch control signal.

10 24. The method of claim 18, wherein said established operating parameter is a time duration said vehicle motor is off or a charge level on said vehicle electrical power source.

25. The method of claim 18, wherein transmission of voltage regulated electrical power to said system computer is interrupted when said actual parameter value is equal to or falls below said threshold parameter value.

15 26. A method for automated shutdown of a mobile data system comprising:
mounting a mobile data system in a motor vehicle having a vehicle motor and a vehicle electrical power source;
transmitting variable voltage electrical power to said mobile data system from said vehicle electrical power source;
converting said variable voltage electrical power to voltage regulated electrical power for operation of said mobile data system;
running an application program in said mobile data system;
establishing an established operating parameter as a shutdown indicator for said mobile data system;
assigning a threshold parameter value to said established operating parameter;
20 monitoring operation of said mobile data system or said motor vehicle to determine actual parameter values of said established operating parameter;
comparing said actual parameter values with said threshold parameter value to create parameter comparison data; and
closing said application program in response to said parameter comparison data.

27. The method of claim 26, further comprising creating a system shutdown command prior to closing said application program, wherein said system shutdown command is created in response to said parameter comparison data.

5 28. The method of claim 26, further comprising terminating conversion of said variable voltage electrical power to said voltage regulated electrical power in response to said system shutdown command.

29. The method of claim 26, wherein said established operating parameter is a time duration said vehicle motor is off or a charge level on said vehicle electrical power source.

10 30. The method of claim 26, wherein said at least one application program running in said mobile data system is closed when said actual parameter value is equal to or falls below said threshold parameter value.